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STAFF RECOMMENDATION
ON CONSISTENCY DETERMINATION

Consistency Determination No.	CD-28-01
Staff:	MPD-SF
File Date:	3/21/2001
60th Day:	5/20/2001
75th Day:	6/04/2001
Commission Meeting:	5/9/2001

FEDERAL**AGENCY:**

U.S. Army Corps of Engineers (Corps)

PROJECT**LOCATION:**

Los Angeles River Estuary, City of Long Beach, and offshore of Long Beach (disposal at North Energy Island Borrow Pit, with cap material coming from South Energy Island Borrow Pit), mouth of Los Angeles River and offshore of Long Beach, Los Angeles Co. (Exhibits 1-2)

PROJECT**DESCRIPTION:**

Pilot studies using 130,000 cu.yds. dredging, for treatment and offshore disposal of contaminated sediment (Exhibits 1-5)

SUBSTANTIVE**FILE DOCUMENTS:**

See page 21.

STAFF NOTE: As of the date of publication of this staff report, the Commission staff had not received several critical pieces of information and/or commitments to provide needed information, and the Corps' draft monitoring plan was still undergoing review and modification by the Contaminated Sediments Task Force. Because the Corps' consistency determination did not include a complete project description, finalized monitoring plan, and a commitment to perform long-term monitoring, the staff is recommending that the Commission object to the Corps' consistency determination.

If the staff receives additional information and/or commitments from the Corps, the staff will publish an addendum to this staff report prior to the Commission's scheduled hearing on May 9, 2001.

EXECUTIVE SUMMARY

The U.S. Army Corps of Engineers (Corps) has submitted a consistency determination for a pilot project to study various components of contaminated sediments management in the Los Angeles/Long Beach harbor area. The project is both an outgrowth of regional contaminated sediments management in general, as well as an opportunity to benefit navigation by conducting advance maintenance dredging in the Los Angeles river estuary. The project involves both aquatic capping and chemical treatment with subsequent upland disposal. The aquatic capping component of the project would consist of dredging 130,000 cubic meters (cu. m.) of contaminated sediment from the Los Angeles River Estuary, located in Long Beach Harbor near (immediately upstream of) the Queensway Bridge, and placing the material in the North Energy Island Borrow Pit (NEIBP) near (east of) Island White offshore of Long Beach. The material would then be capped with up to approximately 130,000 cu. m. of clean material dredged from the South Energy Island Borrow Pit (SEIBP). The sediment treatment (cement stabilization) component of the project would first consist of a "bench-scale" (laboratory study) mixing the contaminated sediments with a cement-based product to produce structurally stable soil material. This would be followed by a larger project transporting up to 15,000 cu. m. of contaminated sediments to a staging area, mixing the sediments with a cement-based product, with the ultimate goal of using the material for beneficial reuse as a source of structural fill (the location of which is yet-to-be-determined).

The specific objective of the pilot studies is to evaluate potential contaminated sediment remediation technologies and evaluate them for their effectiveness, implementability, impacts to the environment, and costs. The studies are being reviewed by the Contaminated Sediments Task Force and will be used by the Corps in support of the Los Angeles County Regional Dredge Material Management Plan (DMMP) Feasibility Study. At this point, the pilot studies have not been fully designed, and the monitoring measures are still being reviewed by the Contaminated Sediments Task Force and thus remain in flux. In addition, while Corps has included a draft monitoring plan in with its consistency determination, the plan states concerning long term monitoring:

"...the current COE funding for the project expires at the end of fiscal year 2001. The COE and the CSTF will be working together to identify sources of funding to conduct monitoring that extends beyond the current funding period including the long term monitoring described in this document.

Because of this lack of a finalized project design, monitoring plan, and monitoring commitments, the project lacks: (1) a complete project description, or at a minimum a commitment for further Commission staff federal consistency review of the to-be-designed

project components; (2) a firm commitment for long term monitoring of capped aquatic contaminated sediments; and (3) a commitment for the least environmentally damaging dewatering method or the cement stabilization component. Therefore the Commission has insufficient information to determine the project's impacts, and the project is inconsistent with the marine resource, dredging, water quality, and environmentally sensitive habitat policies (Sections 30230, 30231, 30233(a), and 30240) of the Coastal Act.

Concerning other issues raised, the dredging would benefit navigational safety for the Catalina Ferry, and recreational boating activities located in Queen's Way Marina. Therefore, the project is consistent with the recreational boating policies (Sections 30220 and 30224) of the Coastal Act. Due to the contamination issues the material is not suitable for beach replenishment. Therefore, the project is consistent with the sand supply policy (Section 30233(b)) of the Coastal Act.

STAFF SUMMARY AND RECOMMENDATION

I. Background/Project Description. In coordination with the Contaminated Sediment Task Force (CSTF) for the Los Angeles County Region,¹ the Corps is studying a number of alternative measures for the treatment and/or disposal of contaminated sediments. The measures include: (1) Aquatic Capping; (2) Cement Stabilization; (3) Sediment Washing; and (4) Sediment Blending. The measures include both pilot studies and bench scale (laboratory) studies. The objective of the pilot studies is to evaluate potential contaminated sediment remediation technologies to provide technical information for the Los Angeles County Regional DMMP Feasibility Study (to be prepared by the Corps), and to evaluate the technologies for their effectiveness, implementability, impacts to the environment, and costs.

The subject of this consistency determination is the pilot studies for aquatic capping and cement stabilization. The pilot studies involve dredging up to 130,000 cu. m. of material just upstream of the existing Los Angeles River navigation channel and the Queensway Bridge, at the mouth of the Los Angeles River (Exhibit 3). The dredge site would be within an irregular polygon approximately 200 meters (m) long by 150 m wide, which would be dredged to a depth of elevation -4 to -6 m mean lower low water (MLLW).

The aquatic capping component of the project would consist of disposal of most of the 130,000 cubic meters (cu. m.) in the North Energy Island Borrow Pit (NEIBP) near (east of) Island White offshore of Long Beach (Exhibits 2 & 4). The material would then be capped (Exhibit 5) with up to approximately 130,000 cu. m. of clean material dredged from the South Energy Island Borrow Pit (SEIBP).

¹ Formed in 1998 to address the problem of managing contaminated dredged sediments.

The sediment treatment, or “Cement Stabilization,” component of the project would first consist of a “bench-scale” (laboratory study) mixing contaminated sediments with a cement-based product to produce structurally stable soil material. This would be followed by a larger project transporting up to 15,000 cu. m. of contaminated sediments to a staging area, mixing the sediments with a cement-based product, with the ultimate goal of using the material for beneficial reuse as a source of structural fill (the location of which is yet-to-be-determined).

The Corps provides additional details on both studies, as follows

Aquatic Capping Pilot Study

Sediment Source – LARE [Los Angeles River Estuary]

Material from the LARE would be dredged mechanically (most likely with a clamshell bucket)[Exhibit 9], ... transported ... to the NEIBP on a split-hull barge, and discharged from the barge into the disposal site.... [The] dredging would be a 24-hour operation ... [lasting] up to one month to complete.

Disposal Site – NEIBP

The disposal site at the NEIBP is located about 4 km (2.5 miles) east [of the] proposed ... dredge site. These numerous depressions within the NEIBP, and a general area for the aquatic capping disposal site has been identified (Figure 4 [Exhibit 4]). However, the exact location of the aquatic cap within these depressions will be determined through the design process.

The NEIBP is a relatively steep walled depression (Figure 5 [Exhibit 6]). The tops of the pit walls are approximately –8 to –10 m MLLW (26 to 33 feet). The bottom of the pit is at approximately 18.5 m MLLW (60 feet). Within the cell, disposed sediments from the LARE will be placed in a layer about 2 to 2.5 m thick (7-8 feet). LARE sediments will be released from a split-hull barge.

After a consolidation period of about one month, a 1 to 1.5 m (3 to 4 foot) layer of clean cap material will be placed over the LARE sediment (most likely hydraulically) potentially yielding in a final elevation of between –14.5 and –15.5 MLLW (48 to 51 feet) assuming that no consolidation takes place. ... The final elevation will be determined during project design. ...

A berm will likely be required along one or more sides of the disposal cell in the NEIBP. The berm would be high enough to contain both the LARE material and the clean capping material. The anticipated height is roughly 4 m (13 feet) The berm would be constructed using suitable clean dredged material....

Cap Material Source –SEIBP

... The proposed capping material was dredged by the COE from the Queen's Gate entrance in Long Beach Harbor. Disposal at the SEIBP occurred from November 1998 through Spring 1999. Prior to dredging, the material was tested in compliance with the Clean Water Act (CWA) and deemed suitable for open ocean disposal.

The cap source sediments are at a depth of between –9 and –13 m MLLW (30 to 43 feet) within the SEIBP The designated area for capping material is approximately 100 m by 200 m. The volumes of cap material needed and depths of dredging within the SEIBP area will be determined during project design. However, the volume of capping material required will not exceed 130,000 cu. m. Capping and placement activities would take approximately one month.

One option for dredging SEIBP material would be using a hydraulic dredge (most likely a cutterhead [Exhibit 10]). In this case, cap sediment would be transported by floating pipeline to the NEIBP located approximately 1 km (3,280 feet) away. Dredged material would be placed in thin lifts over the capping site until sufficient capping depth is achieved (likely 1-1.5 m deep). It is likely that a submerged diffuser of some sort would be used to control the spread of cap material for the hydraulic placement option [Exhibit 11].

A second option for cap placement is to dredge capping material using a mechanical dredge on a floating derrick. Dredged material would be placed on a split-hull barge and released above the NEIBP to create the cap. ...

Cement Stabilization Pilot Study

The Cement Stabilization Pilot Study would involve dredging up to 15,000 cu. m. of contaminated sediment from the same dredge site that would be used for the Aquatic Capping Pilot Study, near Queensway Marina. The feasibility of cement stabilization and the exact quantity of material to be used in the proposed pilot study is dependent on the results of the bench scale study that would be conducted to determine treatment efficacy. The actual volumes necessary to meet project objectives would be determined during the design phase of the pilot study and would be based on engineering consideration, bench scale results, disposal site availability, and the ability to meet project objectives and the overall schedule.

Standard mechanical dredging equipment would be used for dredging activities. The dredged material would be placed on haul barges and transported via tugboat to a dockside or upland location at either the Port of Long Beach (POLB) or the Port of Los Angeles (POLA). The haul barge would have a fence (solid metal or wood barricades) about 4 feet high. The number of barges required for transport would depend on the volume of material to be dredge and the size of the barges. If an upland site is selected,

material will be transferred from the barge/s to upland area with a mechanical dredge. A dredging plan is presented in Appendix F that discusses the anticipated operations that will be conducted by a contractor during the dredging and stabilization activities.

Dredged material would first undergo a natural dewatering process which would take anywhere from eight hours to several days. After dewatering is complete, the material would be blended with reagents such as Portland cement, lime kiln dust, and/or fly ash to encapsulate and immobilize the contaminants and bind fine material in the sediment matrix. The stabilized dredged material would then undergo a curing process. The dewatering, blending, and curing processes could occur either dockside on barges or at an upland site.

The potential end uses of the stabilized material have not been finalized. However, it is likely that cement stabilized materials would be used as industrial grade fill, structural fill, and/or disposed in a waste landfill at the POLB or the POLA. Testing would be designed to provide information about the potential stability, structural characteristics, and the chemical characteristics of the stabilized material in order to determine the most suitable disposal method. ...

Stabilized material will be transported via barge or truck to its final destination. Stabilized material will be loaded either mechanically or with an end loader, if appropriate (not feasible from a barge).

The pilot projects would also include pre-construction, construction, and post-construction monitoring to assess the potential impacts of dredging, treatment, and cap placement, as well as the long-term viability of the cap. The Corps has prepared a draft monitoring plan, which, as stated on page one of this report, is still undergoing review and modification by the Contaminated Sediments Task Force. The Corps also states that “best management practices” (BMPs) would be implemented to avoid or minimize impacts during construction, and that “Funding sources for recommended long term monitoring efforts will be identified in coordination with the CSTF.”

II. Background/Related Commission Action. The area proposed for dredging has not previously been dredged; however the material would eventually migrate downstream and fill the existing navigation channel that has been previously dredged to maintain the navigation channel leading to the Queens Way marina. In 1995, the Corps dredged 300,000 cu. yds.² of material from the Los Angeles River channel as an emergency action, with disposal at the borrow pit at the mouth of the river (Exhibit 6)³. The Commission subsequently concurred in

² One cubic meter = 1.3 cubic yards. One cu. yd.= 0.76 cu. m.

³ This borrow pit is located offshore of Island Grissom and was originally created to supply the material for the energy island. The City of Long Beach used this pit several times as a disposal site for Los Angeles River dredging, between 1989-1994.

an after-the-fact consistency determination, which included a temporary cap (CD-43-95). After-the-fact testing analysis showed the material to be contaminated, as had been suspected. The Corps capped this material with 175,000 cu. yds. of clean material (Pier J access dredging)⁴.

The Commission staff raised concerns about this concept, because the cap thickness, 1.75 to 5 feet, may not be enough to fully isolate the contaminated material and the grain size of the cap material may be too small to assure its permanence. Additionally, the Corps had not conducted any of the studies necessary to assure that it designed the cap to isolate the sediments from disturbance associated with ocean currents, wave energy, Los Angeles River flood flows, or benthic infauna (burrowing organisms).

Because of Commission concerns, the Corps, EPA, and the Commission staff negotiated modifications to that project. Those modifications included placement of a temporary cap, monitoring it, and designing a permanent contained aquatic disposal site at this location. Thus, in CD-43-95 the Corps committed to providing a consistency determination within three years, which would analyze three years of monitoring of the temporary cap, and either provide data to demonstrate that the cap will perform adequately as a permanent solution, or design a new cap or an alternative solution.

In 1997, the Commission concurred with a Corps consistency determination for 100,000 cu. yds. of maintenance dredging of contaminated sediments in the Los Angeles River, with disposal in the same borrow pit as the previously discussed project. While concerns were raised about the need to cap the material with clean sediment, the Corps convinced the Commission that the sediment quality of the dredged sediments were the same as those in the disposal area, and thus that no cap was necessary, and further, that if the site acted as a sediment trap as suspected, it would be capped naturally. The Commission agreed in its concurrence with CD-5-97, finding:

The ... disposal site is in the same vicinity (Los Angeles River estuary) as the dredge site, the sediment in the disposal site is physically and chemically similar to the material proposed for dredging, and the pit is functioning as trap for contaminated material transported by the Los Angeles River. The revised project also includes an evaluation of the borrow pit as a sediment trap to provide information to support preparation of a Contaminated Sediment Management Strategy by the Los Angeles basin Contaminated Sediment Taskforce.

At the same time the Commission noted:

Based on this information, the Commission, at this time, agrees with the Corps' conclusion not to cap the material disposed from this project. However, the

⁴ The Corps accomplished this through its permitting of the Port of Long Beach's dredging, which the Commission reviewed as (CC-41-95 and 5-95-111).

Commission has concerns that future monitoring and studies may provide evidence that capping of contaminates in the borrow pit may be needed. If necessary, the Commission will evaluate this issue through the Corps' agreement for future consistency review of a permanent cap over the material deposited from the 1995 emergency project.

The Corps also dredged 163,800 cu. yds. of contaminated material (and 390,000 cu. yds. of clean material) from the Los Angeles River in 1999/2000, with disposal of the contaminated material at a confined site in the Port of Long Beach (Slip 2), and the clean material at EPA approved offshore disposal site LA-2 (CD-94-98).

III. Status of Local Coastal Program The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the California Coastal Management Program (CCMP), the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has incorporated the City of Long Beach LCP into the CCMP.

IV. Federal Agency's Consistency Determination The Corps has determined the project to be consistent to the maximum extent practicable with the CCMP.

V. Staff Recommendation The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **concur** with consistency determination CD-028-01 that the project described therein is fully consistent, and thus is consistent to the maximum extent practicable, with the enforceable policies of the California Coastal Management Program.

STAFF RECOMMENDATION:

Staff recommends a **NO** vote on the motion. Failure of this motion to pass will result in an objection to the determination and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

RESOLUTION TO OBJECT TO CONSISTENCY DETERMINATION:

The Commission hereby **objects** to the consistency determination by the U.S. Army Corps of Engineers, on the grounds that (1) the project described therein is not consistent to the maximum extent practicable with the enforceable policies of the CCMP; and (2) the project does not contain enough information to determine if the proposed project is consistent to the maximum extent practicable with the CCMP.

VI. Consistent to the Maximum Extent Practicable. Section 930.32(a)(1) of the federal consistency regulations provides, in part, that:

The term “consistent to the maximum extent practicable” means fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency.

The Commission recognizes that the standard for approval of Federal projects is that the activity must be “consistent to the maximum extent practicable” (Coastal Zone Management Act Section 307(c)(1)). This standard allows a federal activity that is not fully consistent with the CCMP to proceed, if compliance with the CCMP is “*prohibited [by] existing Federal law applicable to the Federal agency's operations*” (15 C.F.R. § 930.32(a)(1)). The Corps has not asserted that, although the proposed project may be inconsistent with one or more enforceable policies of the CCMP, it is consistent to the maximum extent practicable with the CCMP because of “statutory provision, legislative history, or other legal authority which limits [its] ... discretion to comply with the provisions of the” CCMP (15 C.F.R. § 930.32(a)(2)). Therefore, there is no basis for the Commission to conclude that, the proposed project is consistent to maximum extent practicable with the CCMP.

VII. Project modifications. Section 930.43(a)(3) of the federal consistency regulations (15 CFR § 930.43(a)(3)) requires that, if the Commission’s objection is based on a finding that the proposed activity is inconsistent with the CCMP, the Commission must identify measures, if they exist, that would bring the project into conformance with the CCMP. That section states that:

The State agency should also describe alternative measures (if they exist) which, if adopted by the Federal agency, would allow the activity to proceed in a manner consistent to the maximum extent practicable with the enforceable policies of the management program. Failure to describe alternatives does not affect the validity of the State agency’s objection.

As described in the findings below, the proposed project is inconsistent with the marine resource, dredging, environmentally sensitive habitat, and water quality policies (Sections 30230, 30233, and 30240) of the CCMP. Pursuant to this federal regulation, the Commission hereby identifies the following measures, which, if adopted by the Corps, would bring the project into compliance with the CCMP:

1. Long-Term Monitoring: a firm commitment for long term monitoring of capped aquatic contaminated sediments; and
2. Dewatering: a commitment to delete the barge dewatering option for the cement stabilization component, and to effectively filter (and monitor water quality for) any return water to Los Angeles/Long Beach harbor coastal waters.

VIII. Necessary Information: Section 930.43(b) of the federal consistency regulations (15 CFR Section 930.43(b)) requires that, if the Commission's objection is based on a lack of information, the Commission must identify the information necessary for it to assess the project's consistency with the CCMP. That section states that:

If the State agency's disagreement is based upon a finding that the Federal agency has failed to supply sufficient information (see Section 930.39(a)), the State agency's response must describe the nature of the information requested and the necessity of having such information to determine the consistency of the Federal activity with the management program.

As described fully in the marine resource, dredging, environmentally sensitive habitat, and water quality sections below, the Commission has found this consistency determination to lack the necessary information to determine if the proposed project is consistent with Sections 30230, 30231, 30233, and 32040(a) of the Coastal Act. In order to evaluate the project's consistency with the CCMP, the Commission needs finalized monitoring plans, as well as a complete project description once the project has been fully designed. The monitoring plans are needed before the Commission could concur with this consistency determination.. In any event, the specific necessary elements for the project description need to include:

1. **Project Description:** (a) the specific boundaries of and bathymetry at the proposed disposal site within the NIEBP; (b) final disposal quantities and disposal configurations (including any berms determined necessary) at the NIEBP; and (c) quantities, dewatering procedures, treatment location, and ultimate disposal location for the cement stabilization component of the project.
2. **Monitoring Plans.** (a) a finalized monitoring plan for the capped aquatic contaminated sediments at the NIEBP, including a commitment for long term monitoring (as discussed above); and (b) a finalized monitoring plan for the cement stabilization component, including addressing any dewatering to coastal waters.

IX. Federal Agency Responsibility. Section C(a)(i) of Chapter 11 of the CCMP requires federal agencies to inform the Commission of their response to a Commission objection. This section provides that:

If the Coastal Commission finds that the Federal activity or development project ... is not consistent with the management program, and the federal agency disagrees and decides to go forward with the action, it will be expected to (a) advise the Coastal Commission in writing that the action is consistent, to the maximum extent practicable, with the coastal management program, and (b) set forth in detail the reasons for its decision. In the event the Coastal Commission seriously disagrees with the Federal agency's consistency determination, it may request that the Secretary of Commerce

seek to mediate the serious disagreement as provided by Section 307(h) of the CZMA, or it may seek judicial review of the dispute.

This requirement was recently codified in section 930.43(e) of the federal consistency regulations which took effect on January 8, 2001. Section 930.43(e) provides:

If a Federal agency decides to proceed with a Federal agency activity that is objected to by a State agency, or to follow an alternative suggested by the State agency, the Federal agency shall notify the State agency of its decision to proceed before the project commences.

X. Findings and Declarations. The Commission finds and declares as follows:

A. Dredging. Section 30233(a) of the Coastal Act provides, in part, that:

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

....

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

Section 30233(a) of the Coastal Act imposes a three-part test on dredging and filling projects: (1) an allowable use test; (2) an alternatives test; and (3) a mitigation test because is an allowable use for dredging and filling. While the project is a pilot study designed to address contamination sediments management in general, the Corps notes that:

A secondary purpose of this project is to remove shoaled material from the federal navigation channel. While this material does not pose an immediate hazard to most navigation, future storms could move the shoal closer to the Queensway Marina entrance. Removal of contaminated sediment would also benefit the local environment.

The Commission finds that both the pilot study nature of the project, as well as its function to help maintain navigability of the Los Angeles River channel, qualify it as an allowable use for maintenance dredging of existing navigation channels, and that the project is therefore consistent with the first test of Section 30223(a)(2). However, the Corps' consistency determination does not contain enough information to evaluate the project's consistency with the alternatives and mitigation tests of Section 30233(a). The alternatives test is not met because the Corps is not proposing the least environmentally damaging feasible alternative for

dewatering of the cement stabilization component of the project. The mitigation test is not met because without a finalized monitoring plan for the aquatic component, as well as a commitment to long term monitoring for contaminated sediments placed in the marine environment, the Commission is unable to determine whether adverse effects would be discovered, and if they were, whether any impacts could be mitigated or remediated. Since the fundamental purpose of a pilot project is to provide valuable information to guide future contaminated dredge projects in the region, these monitoring needs are particularly relevant. Without this information, the Commission cannot determine the full effects from the proposed dredging and filling, and therefore, the Commission cannot determine whether the proposed project is the least damaging feasible alternative or whether additional mitigation is necessary to reduce or eliminate environmental effects. The Commission concludes at this time that the Corps' consistency determination lacks sufficient information to evaluate the project for consistency, and that the project is inconsistent with the dredging and filling policy (Section 30233(a)) of the Coastal Act.

B. Water Quality and Marine Resources. Section 30230 of the Coastal Act provides that:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231 of the Coastal Act provides that:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

In past dredging projects, the Corps tested sediments dredged from the Los Angeles River navigation channel and found them to contain elevated levels of contaminants. The proposed project includes aquatic disposal of contaminated sediments at the North Energy Island Borrow Pit (NIEBP), to be capped with clean sediments taken from the South Energy Island Borrow Pit (SIEBP). The material for all three areas was tested; the test results showed:

Various contaminants were found in the Los Angeles River Estuary sediments. In most cores for most chemicals, the bottom sections had higher concentrations than the top

sections. No contaminants were detected at a concentration that would pose a human health hazard. Most contaminants were at concentrations that were either below the ER-L level or above the ER-L level but below the ER-M level⁵. Contaminants at levels between the ER-L and ER-M may have the potential to have some effects on sensitive organisms. Thus, the concentrations of most chemicals in the Los Angeles River Estuary sediments were at levels that pose little risk to marine organisms. The exception was several pesticides, including chlordane and DDT derivatives, that exceeded the ER-M level in most of the Los Angeles River core samples.

Sediments in the NEIBP also contained detectable levels of many contaminants. As was true of the L.A. River samples, most of the contaminants in the NEIBP were at concentrations that pose little risk to marine organisms. Some samples in the NEIBP had concentrations of chlordane and DDT derivatives that exceeded the ER-M level at which effects on benthic organisms are probable.

Contaminant levels in the SEIBP were low. No contaminants exceeded the ER-M level. DDE in one core exceeded the ER-L level.

Metals and organotins were the only contaminants found in the process water after the various elutriate, leaching, extraction, and precipitation tests. One or two metals in each of the tests exceeded water quality standards.

The Corps consistency determination states concerning biological impacts in general:

Dredging at the LARE

The most direct impact of dredging on biological resources would be the probable elimination of sedentary and slow-moving benthic organisms which have colonized the area since the last dredging episode. However, due to regular sediment deposition from the Los Angeles River, particularly during storm events, sedentary and slow-moving benthic organisms at the proposed dredge site likely represent a dynamic community is influenced by naturally occurring sedimentation. ... Impacts to the benthic community would be short-term and insignificant since effects would be concentrated in a small area. ...

Planktonic organisms in the water column may suffer some short-term, localized stress from the turbidity created during dredging and disposal. ... However, planktonic species are adapted to large losses from naturally high mortality ...and ... impacts of

⁵ ER-L and ER-M: National Oceanic and Atmospheric Administration's (NOAA) ER-L level (Effects Range-Low) and ER-M level (Effects Range-Median) (Long, 1995). The ER-L is the level of concentration of a contaminant in the sediment that has **possible** biological effects; the ER-M is the level of contaminant concentration that has **probable** biological effects.

dredging and disposal on phytoplankton and zooplankton are expected to be insignificant.

A secondary impact of dredging would be the potential resuspension of sediments in immediate and adjacent areas. However, suspended sediments occur routinely during storm events and other natural movement of material and through disturbance caused by routine boat traffic. If water quality monitoring indicates that turbidity controls are needed, then techniques would be implemented to reduce dredging related impacts.

There is considerable technical evidence to support that turbidity and associated suspended sediment impacts from dredging operations are minimal. For example, a number of researchers compared suspended sediment and turbidity levels of dredge operations to those from natural events such as storms and floods and found that these natural events far exceed the turbidity levels created by most dredging operations (reviewed in Hartman 1996). A five year study of this issue by the COE (DMRP 1978) concluded:

"The difficult problem of the effects of turbidity or suspended sediment particles on both water quality and aquatic organisms was addressed with significant results. It was found that, except in unusually environmentally sensitive areas such as coral reefs, turbidity is primarily a matter of aesthetic impact rather than biological impact. It is, of course, often advisable to schedule dredging and disposal operations to avoid disrupting spawning activities and fish migrations. However, studies showed that most adult organisms can tolerate turbidity level and durations far in excess of what dredging and disposal operations produce. These studies, conducted in the laboratory and verified in the field, involved a variety of marine, estuarine, and freshwater organisms."

Short-term increases in turbidity would be monitored during construction, should there be an exceedance, additional turbidity control methods would be employed (see [EA] Section 6 and Appendix F). In addition, a sampling and monitoring plan for the dredge area is proposed to assess the pre-construction condition, conditions during construction, and the post-construction condition (See Appendix C and D). The COE will conduct pre-construction and construction monitoring. The CSTF and COE will determine responsibility for post-construction monitoring.

Placement in the NEIBP

Disposal impacts are expected to be similar to those defined above for the dredging operation. Disposal of the dredged material at the NEIBP would occur with a split-hull barge in single placement events

The impacts of cap placement would be short-term and it is unlikely that a significant benthic community would have re-established in the short time (2 weeks to 1 month)

required for the consolidation process. Therefore, potential impacts would be limited to those associated with turbidity and resuspension. These impacts are expected to be negligible and monitoring would be conducted to ensure the impacts are insignificant. Capping material from the SEIBP would be placed either with controlled split-hull placement, hydraulic pipeline, or mechanical placement. Controlled placement of capping material would minimize the potential of sediment resuspension. It would also ensure that cap placement successfully isolates the target area where potentially contaminated material from the LARE is placed. Potential impacts from capping activities would be minimal.

Capping of contaminated sediments is one of the solutions to the region's contaminated sediments management problems being studied by the CSTF and is an appropriate area for pilot studies. These studies, as well as the overall project concept, are consistent with overall Coastal Act goals for protecting marine resources and water quality. The key to maximizing these benefits is assuring that the studies are well designed, will provide useful information, and will be monitored both to assure adverse effects are minimized, as well as to assure they will be effective in helping to answer some of the regional sediment management questions. As discussed above, the Corps has included in its Environmental Assessment and consistency determination a draft monitoring plan, which, at the time of this writing, was still undergoing review and modification by the Contaminated Sediments Task Force. This draft plan (summarized in chart form in Exhibit 7) includes:

Preconstruction/Baseline: water column monitoring, bathymetry monitoring, and sediment profile imaging;

Post Construction/Short Term: bathymetry monitoring, sediment profile imaging, cap coring, and surface sediment chemistry; and

Post Construction/Long Term: bathymetry monitoring, cap coring/surface sediment monitoring, and benthic community sampling.

In addition to the Commission staff, Heal the Bay has also expressed concerns over the lack of details in the Corps' proposal and the need for long term monitoring (Exhibit 12). The following list summarizes Heal the Bay's concerns and information requests:

1. An adequate environmental assessment of the pilot projects has not been completed because much of the data and design information needed to conduct a sufficient EA is not currently available.

Below is a partial list of the critical data and project specifications needed to assess the environment impacts of this project that are not included in the DEA:

Capping Project

Sediment chemistry data⁶, Volume of material to be dredged and placed in the CAD, Design of CAD including whether berm construction is necessary, Berm material chemistry, Size of berm and volume of berm material, Cap placement technique (hydraulic or mechanic), Thickness of cap, DREDGE modeling results (turbidity and contaminant plumes generated during contaminated sediments dredging), STFATE and MDFATE modeling results of cap placement, and WES modeling results used to estimate effective cap thickness

Concrete stabilization

Origin of sediment for testing (MDR or LARE), Volume of sediment used in testing, Sediment chemistry

Dewatering management:

- 2. When the ACE chooses a final cap thickness, the DEA should include a thorough discussion on what this cap thickness is based including chemical advection and diffusion estimates, and bioturbation.*
- 3. The DEA lacks any discussion on the potential long-term water quality and biota impacts of the CAD.*
- 4. Alternatives evaluated in the DEA for the pilot capping pilot study should include capping scenarios using smaller volumes of contaminated sediment.*
- 5. (Page 36, 4.3.2) It is unknown whether a long-term benefit of the capping project will be isolation of the contaminated sediments from the environment.*
- ...*
- 7. The DEA should discuss the potential release of contaminants and resulting water quality and biota impacts that will occur during the time the contaminated sediments consolidate at the disposal site before the cap is constructed.*
- 8. The DEA should compare the potential environment impacts associated with placing the contaminated sediments and cap material hydraulically or with a split barge.*

⁶ Heal the Bay notes that it received the sediment chemistry data separately from the DEA on April 18th, but that it believes that “Until the DEA incorporates and discusses this data in the context of environmental impacts, the DEA is insufficient for public review.”

Turbidity Issues:

9. As discussed in the recent CSTF aquatic subcommittee meetings on the monitoring objectives for the pilot project, please remove all discussion about compliance with LA RWQCB requirements.

10. The use of the comparison between the turbidity caused by dredging to turbidity caused by storms and floods to support any assumptions about the impacts associated with the dredging is inappropriate and should be removed.

11. Please reconcile the apparent discrepancy on the relationship between turbidity and water column chemistry.

12. Section 4.3.2.3 should include a discussion of the number of exceedances of the RWQCB turbidity standards that occurred at MDR during the last dredging project.

Contaminant resuspension comments:

13. The DEA draws premature conclusions about the significance of contaminant resuspension that occurs during dredging.

14. Please remove the statement on page 43 that states disposal of the contaminated sediments and cap placement will not “result in significant environmental effects outside of the immediate placement area”.

15. Please add to the water quality discussion (section 4.3.2.1) that although the Port of Long Beach did not detect pollutants in the water column at 100 m from the dredge, their data was inconclusive because their detection limits were above the California Toxic Rule (CTR) chronic saltwater criteria for arsenic, cadmium, copper, lead, nickel, PCBs and DDT.

Appendix F – Dredging and Disposal Construction Plan Los Angeles County Regional Dredge Material Management Plan

16. Is there sediment chemistry data available for the material that will be over-excavated if a berm is built at the capping site?

17. The material that will be used for berm construction must be specified and the sediment chemistry data for this material should be included in the EA.

18. The method for dredging the LARE sediments for the capping project should be chosen because it is the method the CSTF and ACE wish to test as part of the pilot project and not because of time schedules.

19. During the concrete stabilization project, if dewatering occurs on the barge, the water should not be discharged from the barge into the ocean.

20. *Please clearly list the water quality criteria used to evaluate water quality impacts.*

While most if not all the details concerning short term monitoring can probably be resolved, to date they have not. More importantly, the overall concern over the need to continue to perform long term monitoring for any situation where contaminated sediments are being placed in the marine environment is of particular concern to the Commission. Concerning the long term monitoring, the Corps states:

...the current COE funding for the project expires at the end of fiscal year 2001. The COE and the CSTF will be working together to identify sources of funding to conduct monitoring that extends beyond the current funding period including the long term monitoring described in this document.

The Commission believes that it is not appropriate to dispose contaminated sediments, even with capping as included in this case, without commitments for long-term monitoring. When EPA proposed a demonstration capping project on the Palos Verdes shelf (and EPA was capping existing contaminants, not disposing of any new contaminants), the Commission was unwilling to concur until EPA agreed to incorporate a long-term monitoring commitment (CD-52-00). Without a clear commitment for long-term monitoring, the Commission is unable to determine that the contaminants would remain isolated and that the project would not adversely affect marine resources and water quality of the coastal zone. Therefore, the Commission finds at this time that the project is inconsistent with the marine resource and water quality policies (Sections 30230 and 30231) of the Coastal Act.

C. Endangered Species. Section 30240 of the Coastal Act provides that:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Federally-listed threatened or endangered animal species that may occur in the project area include: California brown pelican (*Pelecanus occidentalis californicus*) ; California least tern (*Sterna antillarum browni*); Western snowy plover (*Charadrius alexandrinus nivosus*) and Green sea turtle (*Chelonia mydas*). State listed threatened or endangered species include the Peregrine falcon (*Falco peregrinus anatum*), and Belding's savannah sparrow (*Passerculus sandwichensis beldingi*). Several species of marine mammals may be transient visitors to the harbor and the disposal site, but the Corps states they “are not expected to be affected by this project.” In its consistency determination, the Corps describes the potential impacts on listed species as follows:

Turbidity from dredging and disposal could prevent [brown] pelicans from foraging in the immediate vicinity of the dredge, although the species may find suitable foraging habitat near the fringe of any turbidity plume that may form. ... Pelicans would find other areas in the harbor and offshore to forage and would not be affected by the dredging or capping activities. These birds do not breed in the area, and are not held to a relatively limited geographic area as are locally nesting birds.

Dredging and disposal operations are expected to be completed during Least tern nesting season. Interference with least tern foraging could be a concern if turbidity from dredging affected surface water clarity over a substantial portion of preferred foraging areas during the breeding season. ... Most foraging occurs within 3 km (2 miles) of nest sites and the LARE dredging will occur 5 km (3 miles) away. In a recent tern nesting survey of the LARE (Chambers Group 2000), the survey station immediately to the northwest of Queensway Bridge showed no foraging activities by least terns. This station is immediately to the southeast of the project dredge site (Figure 9 [Exhibit 6]). ... At the Island Grissom borrow pit, approximately midway between the dredge and disposal site and approximately 8 km (5 miles) from the nesting colony, 50 foraging flights and 157 foraging dives were observed during the 2000 nesting season. As mentioned before, since foraging was observed at the LARE/Island Grissom borrow pit, it is assumed that foraging may also occur in shallow waters near the disposal site. The actual disposal site, however, is within deeper waters of the NEIBP, which is unlikely foraging habitat for the least tern. ...

Although the COE does not expect this project to adversely affect least terns, the COE will commit to implementing a turbidity monitoring program to protect both general water quality and tern foraging habitat. The intent of this monitoring program is to ensure that any turbidity plume that may be formed is minimized, and that significant turbidity does not extend beyond the immediate dredge or disposal areas. The specific procedures are outlined in Appendix D and E.

The COE has determined that this project will not affect any Federally-listed threatened or endangered species, and that formal consultation (pursuant to Section 7 of the Endangered Species Act) is not required at this time.

The endangered species concerns raised by the project primarily concern the California least tern and the California brown pelican, and are two-fold: (1) in the short term, turbidity and temporary release of contaminants during dredging could affect foraging by these species; and (2) in the long term, if the capped material is not monitored, contaminants could be re-released into the marine environment and the food chain, ultimately potentially adversely affecting these two species.

The Corps proposes to perform the dredging and disposal during the least tern season (April 1 thru Sept. 15); however as stated above the Corps has committed to implementing a turbidity monitoring program to protect both general water quality and tern foraging habitat. The Corps

points out the dredge and disposal areas are not critically important feeding areas, and the information to be gleaned from this pilot project (including comparisons of turbidity in general and contaminant concentrations in the water column) should assist the Commission and the Contaminated Sediments Task Force in the future in developing more effective turbidity controls. In addition, the overall benefits of the pilot project in assisting long term management of contaminated sediments in the region should also assist in the long term protection of these species. Nevertheless, without a finalized monitoring plan for the aquatic component of the project, a commitment for long term monitoring for contaminated sediments placed and capped in the marine environment, and a commitment for the least environmentally damaging dewatering for the cement stabilization component, the Commission is unable to determine whether adverse effects would be discovered, and if they were, whether the project would adversely affect listed species. Therefore, the Commission finds that the Corps' consistency determination does not contain enough information to enable the Commission to evaluate the project's impacts, and that the project is inconsistent with the environmentally sensitive habitat policy (Section 30240) of the Coastal Act.

D. Recreational Boating. Section 30220 of the Coastal Act provides that:

Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Section 30224 of the Coastal Act provides, in part, that:

Increased recreational boating use of coastal waters shall be encouraged....

Shoaling of Los Angeles River estuary interferes with recreational boating at the Queen's Way Marina. In its consistency determination, the Corps states:

The proposed dredging of the LARE, subsequent disposal at the NEIBP, capping at the NEIBP with SEIBP sediments, and handling of dredged material at on barges or upland at a portside facility for cement stabilization would not cause a significant adverse impact upon public access to the Los Angeles/Long Beach Harbor area, local beaches, or associated recreation facilities. Public access would need to be limited on a temporary basis within the immediate area of the dredging and disposal operations for safety reasons.

The dredging and disposal operation would be conducted such that obstruction to navigating vessels is minimized. The operation would be bounded by buoys and other markers to ensure that navigators are aware of the operation and can safely avoid the area. The dredge operator shall move the dredge for law enforcement and rescue vessels whenever necessary. By improving navigability, this project will have the overall positive effect of enhancing public access through the LARE near the Queensway Marina. In addition, the information provided by the pilot project would help to guide long-term sediment management within Los Angeles County.

The main boating activity in the Queen's Way Marina is the Catalina Ferry. Within the LA/LB Harbor complex, several major charter boat companies provide charter service to Avalon and Isthmus Cove on Santa Catalina Island, including Catalina Cruises in Queen's Way Marina. These recreation charters also serve specialized activities, including sportfishing, scuba diving, whale watching, and harbor touring. While the proposed dredging has been designed primarily to serve as a pilot project to assist in long term management of contaminated sediments, as the Corps points out it will also improve navigation in the relatively short term, by removing material that would naturally migrate into and cause shoaling within the Los Angeles river navigation channel. In addition, in the long term, if it expedites or assists in long term sediment management issues, it would least indirectly foster benefits to maintenance of existing navigation channels on a regional basis, thereby supporting and protecting recreational boating uses within a number of navigation channels. The Commission therefore finds that the proposed project is consistent with the recreational boating policies (Sections 30220 and 30224) of the CCMP.

E. Sand Supply. Section 30233(b) of the Coastal Act provides that:

Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

In the past, sediment dredged from the Los Angeles River estuary has been too finely grained to use for sand supply purposes. The sediment analysis prepared for the current proposal indicates the material averages between 42% and 86% sand. However, even if portions of the material were suitable based on grain size analysis, due to the contamination issues discussed above the material is not suitable for beach replenishment. The Commission therefore finds the project consistent with the sand supply policy (Section 30233(b)) of the Coastal Act.

XI. Substantive File Documents:

1. Draft Environmental Assessment, Los Angeles River Estuary Pilot Study, Los Angeles County Regional Dredge Material Management Plan Pilot Studies, Los Angeles District Corps of Engineers, March 2001.
2. Results of Physical and Chemical Analysis of Sediments Proposed for dredging in the Los Angeles River Estuary, Los Angeles District Corps of Engineers, April 2001.
3. Consistency Determinations CD-043-95, CD-005-97, CD-94-98 (Corps, Los Angeles River).

4. Consistency and Negative Determinations ND-163-97, CD-016-82, CD-013-84, CD-057-86, CD-023-88, CD-031-91, CD-053-92, CD-068-94, CD-88-94, ND-112-94, ND-022-96, and CD-002-98 (Corps, Marina del Rey).
5. *Ecological Evaluation of Proposed Discharge of Dredged Material into Ocean Waters* ("Green Book"), EPA/Corps of Engineers, February, 1991.
6. Consistency Determination CD-052-00 (EPA, Palos Verdes Shelf Pilot Capping Project).